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SPEECH – LANGUAGE PATHOLOGY: RESERVED ACTS

REQUEST AND JUSTIFICATION SUBMISSION

2011 MARCH 15

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This document sets out the reserved acts which the Manitoba Speech and Hearing Association, (MSHA), is requesting for speech – language pathologists. For each proposed reserved act, MSHA describes how a speech – language pathologist provides services that fall within that reserved act, as well as background information about the type of education and practical experience speech – language pathologists obtain so they can provide those services competently and independently.

For a few of the proposed reserved acts, a speech – language pathologist would have to obtain post-graduate training or further experience before they would be able to provide those services. MSHA will indicate which of the proposed reserved acts require such additional training and experience.

When indicating the need for advanced competencies based on additional training and experience, MSHA has considered whether or not it would be necessary for there to be some form of specialty certification before a registrant would be permitted to perform certain of these identified reserved acts. MSHA believes, however, that it would be reasonable for the College of Audiologists and Speech – Language Pathologists, (CASLPM), to rely on the ethical and legal duty of its registrants to perform only those tasks that fall within the scope of their competency.

As regulated professionals under the Manitoba Speech and Hearing Act, MSHA members are trained to assess their own skills, knowledge and abilities. They are required by the Code of Ethics and Standards of Practice to recognize their own limitations and, if they do not have the required competencies, to either refer to others or obtain the necessary skills before proceeding.

Relying on self-assessment to set limitations on the performance of a reserved act is a principle that is applied by many other health professions. An obvious example would be physicians, who as a profession will probably be granted almost all of the reserved acts. But not every physician has the knowledge, skill and ability to perform safely and independently every reserved act that will be granted to the medical profession. Like many regulatory bodies, the College of Physicians and Surgeons must rely on its members to identify situations when they do not have sufficient competencies to provide the required medica1 service.

MSHA believes that speech – language pathologists have demonstrated their commitment and ability to recognize the limits of their competencies and to practice within those limitations. Since 1991, there have been no complaints laid against members for practicing outside their areas of competence. MSHA is confident that speech – language pathologists will continue to recognize the limits of their competencies and to practice within those limitations. The requirement to do so will be set out in the CASLPM Code of Ethics and Standards of Practice. In addition, CASLPM will issue Practice Directions which will clearly outline the services to be provided in the performance of the reserved acts as well as the competencies required to deliver those services.

Reserved Act #1

Make a diagnosis identifying a communication or swallowing disorder and communicate it to an individual or his or her personal representative in circumstances in which it is reasonably foreseeable that the individual or representative will rely on the diagnosis to make a decision about the individual's health care.

Communication

People typically consult a speech – language pathologist because they believe that they, or someone they care for, are not able to communicate effectively. Since most human communication is through the spoken or written word, the consultation usually concerns a speech, language, or cognitive-linguistic disorder, but may extend to include nonverbal behaviours or manual languages as well. The diagnostic task of the speech – language pathologist is to determine whether a communication disorder exists, to describe it, and to discern its cause. This activity is a major part of the professional practice of all speech – language pathologists.

In British Columbia, speech – language pathologists are authorized to perform this reserved act.

Human communication functions are complex. In order to speak, people must know language forms (sounds, words and grammatical patterns), their meanings, and their appropriate social contexts. We must also be able to employ this knowledge in communicative acts, utilizing memory, attention, cognitive organizing activities and physical speech movements to put our ideas into words. Given such complexity, communication breakdowns can occur for many different reasons: lack of knowledge of language form, misunderstanding of social expectations, failure to recall the needed words, motor impairment, or cognitive impairment, for example. Moreover, these deficiencies usually reflect some general condition, disease or disorder, such as mental deficiency, learning disability, autism, stroke, dementia, head injury or hearing loss. The speech – language pathologist is able to choose among these alternatives, and others, by the careful analysis of data from medical history, interviews, physical examination, naturalistic observation, and behavioural testing.

Clients (or their families) self-refer to a speech – language pathologist or are referred by some other health or education professional. The speech – language pathologist may function as part of a larger clinical or educational team and make use of findings from other health, psychological or educational assessments. The differential diagnosis of the communication disorder or speech or language disorder, however, is made independently.
Professionals with less expertise in human communication may fail to recognize a communication disorder or may not know whether an observed communication pattern is consistent with known disease states. For example, family physicians may advise parents that nonverbal three-year olds are merely late talkers rather than disordered learners, although research evidence indicates this is highly unlikely. Or, a home care nurse may wrongly attribute a client's slurred speech to a previous diagnosis of early Alzheimer's, thereby missing the signs of a stroke that would warrant referral to a physician. In addition, speech – language pathologists are trained to diagnose specific types of communication disorders, which other medical professionals may not be aware of. For example, being able to diagnose the specific type of dysarthria, or motor speech disorder a person may have, can assist the physician in identifying the neurological disorder related to that dysarthria.

Communication disorders can be roughly classified into two types: developmental and acquired. Each of these can be further subdivided according to whether the disorder involves peripheral structures or more central neural mechanisms. The following examples of diagnostic activity (in highly abbreviated form) are drawn from these various practice arenas.

Example #1:

A mother brings her three and a half year-old son for consultation with a speech – language pathologist (SLP). She is concerned because the boy speaks infrequently, uses short sentences and doesn't know as many words as his two year old sister. The SLP observes the child playing and interacting with his mother, administers language tests, tests of nonverbal problem solving and a hearing screening. The SLP notes that the boy's play is full of complex narratives. His behaviour is appropriate and he uses speech both to describe events and to ask for assistance. His speech, though limited, is intelligible and contains age appropriate sounds such as "S" and "K", and "G". The data confirm the mother's impression of delayed speech and language learning and he is diagnosed with specific language delay. The child is scheduled for language intervention sessions, with the goal of reducing the gap between language skills and other areas of development.

Example #2:

A 57 year-old woman is admitted to hospital with slurred speech following a left hemisphere cerebrovascular accident. She is primarily concerned about her slurred speech, but also mentions that she is having difficulty thinking of words and occasionally understanding what people are saying to her. The speech – language pathologist (SLP) administers a battery of tests including a language assessment and an oral mechanism examination. Following the assessment the SLP diagnoses the woman with mild dysarthria and mild to moderate aphasia. The dysarthria is likely to resolve, however, the aphasia has affected the woman's word-finding, auditory comprehension, reading, and writing abilities. This will have a significant impact on her return to work as a business consultant. The woman is enrolled in a language therapy program, with the goal of improving language function.

Example #3:

An air-traffic controller consults with a speech – language pathologist (SLP) in private practice about his increasingly hoarse voice. He is afraid that his commands may not be understood and he will lose his job. Prior examination by an otolaryngologist indicated no structural abnormalities. The SLP asks the man to vocalize at different pitches and loudness levels, using electronic instruments and her own ear to analyse quality and ranges. She also asks the client about his work habits and ultimately observes him in the tower. Data from these sources indicate that the man has an essentially normal mechanism that is reacting to long hours of use in conditions of stress and poor posture (lack of breath support and muscular tension). He is enrolled in a short course for persons with high vocal-use jobs, with the goal of learning about vocal mechanisms and practical strategies for reducing vocal stress.

SLPs are competent to diagnose communication disorders based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours) [1], child language development/impairment (105 hours), principles of clinical practice (45 hours), speech physiology (60 hours), articulation disorders (60 hours), fluency disorders (45 hours), voice disorders (45 hours), aphasia (60 hours), motor speech disorders (45 hours), structurally related disorders (45 hours), neurocognitive related disorders (30 hours), physical

analysis of speech disorders (30 hours), advanced principles of clinical practice (30 hours). Students also complete clinical practicums in a variety of settings to obtain a total of 350 hours of clinical experience. Following graduation, SLPs are also required to complete one year of provisional membership where they are mentored by a fully registered SLP to ensure competency.

<u>Swallowing</u>

In addition to diagnosing communication disorders, a speech – language pathologist (SLP) in many settings (e.g. child development centres, hospitals, extended care units, rehabilitation centres, community-based swallowing management programs) may also diagnose swallowing disorders (dysphagia). These diagnoses are most often based on interdisciplinary assessments in which the role of the SLP is to assess the oral and pharyngeal phases of swallowing. Such assessments include examination of the oral mechanism, evaluation of oral manipulation of food or liquids of various textures and evaluation of pharyngeal function during swallowing (often assessed in conjunction with a radiologist doing videofluoroscopic swallow studies (VFSS), or using flexible nasendoscopy). The role of the SLP is to diagnose the observed dysphagia by identifying the specific deficits that contribute to it. For example, motor weakness in the oral cavity, pharyngeal phase issues, or even cognitive impairments that contribute to difficulty swallowing. The SLP is able to determine what type of dysphagia the person is experiencing (e.g.; oral, pharyngeal, etc.) and the severity of the dysphagia. In addition, many factors are taken into consideration to determine a prognosis for recovery of swallowing function.

The information that the SLP provides in these situations is valuable to the health care team. In stroke, for example, 10% of deaths within 30 days of admission to hospital can be attributed to pneumonia. One death can be averted for every 11 clients in whom stroke-related pneumonia is prevented[2]. This means that if SLPs are able to assess and diagnose dysphagia, and then treat it appropriately within a timely manner, these deaths can be prevented. In addition, many decisions that are made by other heath care professionals regarding, for example, nutrition, method of medication administration, and even end of life care, are based on, or impacted by, the results of the swallowing assessment and the diagnosis provided by the SLP.

Example #1:

A 57 year-old male who has suffered a right stroke in the middle cerebral artery is admitted to the ER. He presents with slurred speech and coughs when he is given water by his wife in the waiting room. The speech – language pathologist (SLP) is consulted and completes a swallowing assessment that includes an oral motor exam as well as trials of different textures of foods and liquids. The oral motor exam shows decreased strength, more pronounced on the left than the right, incoordination, and decreased range of motion of oral motor structures. Hypolaryngeal elevation is poor and cough is weak. The client coughs on 3/3 trials of thin liquids, however, has no difficulty with thicker liquids. The client has difficulty chewing solid textures of foods as well, but is able to manage pureed foods. The SLP diagnoses the client with moderate to severe oropharyngeal dysphagia and places him on a diet texture of puree and nectar thick liquids. Given that his stroke is recent and that he is relatively young, his prognosis for improvement is good. The nurse then uses this diagnostic information and provides pills crushed, not whole, and the dietician is aware that this client may need extra nutrients/hydration due to the change in diet texture.

Example #2:

A six year-old child with cerebral palsy with a history of recurrent aspiration pneumonias is referred to the speech – language pathologist (SLP) for a swallowing assessment. The assessment reveals oral motor weakness, incoordination, and decreased range of movement. Speech is moderately dysarthric and there is indication of impaired cognition. In the swallowing assessment, the SLP observes the child eating at a rapid rate, taking large bites of food, and large sips of water. Frequent coughing and throat clearing is observed throughout the assessment. The SLP completes a videofluoroscopic swallow study (VFSS) to further assess the child's pharyngeal swallow. The VFSS reveals aspiration of thin liquids; however, the risk of aspiration is decreased when the rate of intake is controlled. The instrumental assessment also shows the child having difficulty manipulating the large amounts of food in the mouth with significant residue of food in the pharynx following the swallow. The SLP diagnoses the child with mild to moderate oropharyngeal dysphagia, which is impacted by cognition, and suggests modifications to the presentation of the food provided, including providing smaller amounts at a time, cutting food into smaller pieces, providing liquids in a sippy cup, and decreasing distractions at mealtimes. Prognosis for improvement in swallowing function is poor given the diagnosis, however, with some modifications; this child should be able to eat a variety of foods and textures. The diagnostic information in this case was helpful to the medical team in determining a possible cause of the child's pneumonia and useful to the family in providing practical advice at mealtimes.

Example #3:

A 65 year-old client diagnosed with laryngeal cancer was referred to the SLP following a partial laryngectomy. An SLP assessment was required to determine the extent to which the surgery had impacted the client's swallowing function. A Fiberoptic Endoscopic Evaluation of Swallowing (FEES) was completed. Results of the FEES indicated decreased pharyngeal and laryngeal sensation, decreased pharyngeal wall contraction, and inability to protect the airway during the swallow. The SLP diagnoses the client with a severe pharyngeal dysphagia with a high risk of aspiration of all solid and liquid textures. The prognosis for improvement is poor, however, the SLP is able to provide the client with swallowing strategies to compensate for the swallowing impairment, allowing safe oral intake of modified diet textures. The diagnostic information provides the medical team with information regarding the client's risk for pneumonia or other medical complications related to dysphagia, including choking, and decreased nutrition/hydration. This information also allows the medical team and the client and family to make decisions about PEG tube placement if appropriate.

SLPs are competent to diagnose swallowing disorders based on a combination of coursework and clinical experience. In the graduate program students take courses in anatomy (60 hours), principles of clinical practice (45 hours), structurally related disorders (45 hours), swallowing disorders (45 hours), advanced principles of clinical practice (30 hours). Students also complete clinical practicums in a variety of settings to obtain a total of 350 hours of clinical experience. Following graduation, SLPs are also required to complete one year of provisional membership where they are mentored by a fully registered SLP to ensure competency. Instrumental swallowing assessments including videofluoroscopic swallow studies and FEES are considered advanced competencies, requiring additional training beyond the graduate level. The majority of the SLPs in Manitoba who complete instrumental assessments are employed by the Winnipeg Regional Health Authority (WRHA). These SLPs adhere to guidelines outlined by the WRHA in order to obtain and maintain competency in performing instrumental swallowing assessments. These competency guidelines, and other researched sources of best practice, would be used in

the development of a Practice Direction for Instrumental Swallowing Assessments enacted by the College of Audiologists and Speech – Language Pathologists of Manitoba. All SLPs registered by CASLPM would be required to follow such practice directions.

Reserved Act #2

Order and/or receive reports of screening or diagnostic tests to diagnose and treat the communication or swallowing disorder.

Speech – Language Pathologists (SLPs) working with clients who have had diagnostic tests, including, but not limited to, Videofluoroscopic swallow studies (VFSS), Fiberoptic Endoscopic Evaluation of Swallowing (FEES), MRIs, chest x-rays, CT scans, etc. base many of their clinical decisions on the results of these tests. SLPs need to have access to the reports that are directly related to swallowing assessments, specifically VFSS and FEES, as well as tests that may be indirectly related to swallowing, (i.e.: chest x-rays) and communication, (i.e.: MRI reports), in order to make informed decisions about diagnosis and treatment.

Example #1:

An individual admitted to an acute care hospital with dysphagia following a stroke may have a VFSS completed at this hospital to diagnose and treat the dysphagia. If the client is then transferred to a rehabilitation hospital, the treating speech – language pathologist (SLP) at the rehabilitation hospital will require the report from the VFSS that was completed at the acute care hospital in order to make appropriate clinical decisions regarding diet texture recommendations, swallowing therapy, re-assessment, and prognosis. If the client is then transferred to a private SLP for outpatient treatment, that SLP may also require these reports at some point in treating this client in order to make appropriate clinical decisions regarding diet texture, therapy, assessment, and prognosis as well.

Example #2:

A client who is known to have dysphagia and is eating a modified diet texture of puree and nectar thick liquids for two weeks develops signs of a chest infection. The physician may order a chest x-ray to determine if the client, has, in fact, developed a chest infection and to determine what may be the cause of the infection. For example, could aspiration have caused an aspiration pneumonia? In this case, it is important for the treating speech – language pathologist (SLP) to be able to order this report to provide them with information regarding the cause of the pneumonia. The SLP is then able to make clinical decisions regarding re-assessment and changing the diet texture if required, if it appears from the report that aspiration may be the cause of the pneumonia.

Example #3:

An individual admitted to hospital following a traumatic brain injury (TBI) may have an MRI done on admission. The MRI will give information regarding the location of the injuries in the brain and the extent of the damage. This is important information for the speech – language pathologist (SLP) in terms of knowing what types of communication, cognitive-communication, or swallowing issues to expect. Someone with damage to the left side of the brain, for example, may have more difficulty with language, whereas someone with damage to the cerebellum may

have motor speech problems. As well, the extent of the damage will give indications for prognosis for recovery (i.e.; length of time and extent of recovery). This information assists the SLP in planning for assessment and treatment and in making long and short term goals for the client.

SLPs are competent to order and receive reports of screening and diagnostic tests based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), child language development and impairment (105 hours), principles of clinical practice (45 hours), speech physiology (60 hours), articulation disorders (60hours), fluency disorders (45 hours), voice disorders (45 hours), aphasia (60 hours), motor speech disorders (45 hours), structurally related disorders (45 hours), neurocognitive related disorders (30 hours), physical analysis of speech disorders (30 hours), advanced principles of clinical practice (30 hours), swallowing disorders (45 hours). Students also complete clinical practicums in a variety of settings to obtain a total of 350 hours of clinical experience. In clinical practicums, SLPs who work in hospitals receive training in completing VFSS, FEES, and writing reports for these assessments. They also receive training in reading and interpreting other medical reports. Following graduation, SLPs are also required to complete one year of provisional membership where they are mentored by a fully registered SLP to ensure competency.

Reserved Act #4 a

Insert or remove an instrument or a device into the external ear canal.

In doing hearing screenings, a speech – language pathologist (SLP) is sometimes required to use an otoscope to either look into the external ear canal or use an otoscope that is designed to screen hearing Using these instruments requires the SLP to place a device into the external ear canal.

In school settings, SLPs are often required to assist a student in checking his or her personal amplification device to be sure the device is functioning properly. This may include inserting and removing the earmold in the student's ear.

In British Columbia, SLPs are authorized to perform this reserved act.

Example #1:

A five year-old child is referred to a speech – language pathologist (SLP) in the school system for articulation difficulties. In the course of the assessment, the SLP uses an audiometer with an insert earphone device to do a hearing screening to determine if the child may have hearing loss. The SLP finds that the child fails the hearing screening and the child is referred to an audiologist.

Example #2:

A 35 year-old with a history of traumatic brain injury due to a fall from a roof is seen by a speech – language pathologist (SLP) in acute care. The SLP finds that the client is having difficulty following instructions and suspects this person may have a hearing loss. The SLP uses an otoscope to view the ear canal and observes wax in the ear. Screening also indicates

decreased hearing. The client is referred to the physician for removal of the wax and to an audiologist for a full hearing assessment.

SLPs are competent to insert or remove an instrument or a device or finger into the external ear canal based on a combination of coursework and clinical experience. In the graduate program, students take courses in applied audiology (60 hours), and aural rehabilitation (45 hours). SLP students also complete clinical practicums in audiology to obtain a minimum of 20 hours of clinical experience, learning to do hearing screenings and basic hearing tests.

Reserved Act #4 b

Insert or remove an instrument or a device beyond the point in the nasal passages where they normally narrow, for the purposes of assessing and managing communication and swallowing disorders.

A speech – language pathologist (SLP) inserts instruments or devices beyond the point in the nasal passages where they normally narrow when he or she performs: Fiberoptic Endoscopic Evaluation of Swallowing (FEES) and flexible transnasal nasendoscopic examinations.

In British Columbia and Alberta, SLPs are authorized to perform this reserved act.

SLPs may treat people who are having difficulty communicating or swallowing because of dysfunction of the anatomy or physiology of the structures required for speech. Visualization and imaging of the vocal tract, laryngeal, and velopharyngeal structures is required to assess and treat these disorders, and can be achieved by placing a nasendoscopic instrument beyond the point in the nasal passages where they normally narrow. Flexible fiberoptic nasendoscopy is used and is performed with a flexible nasendoscope inserted through the nasal passage. High intensity light transmitted by a fiberoptic bundle illuminates structures to be viewed by the clinician or recorded. This is an effective tool for evaluating, assessing, and adjusting treatment for voice, resonance, aeromechanical, and swallowing disorders. If such an assessment identifies a physical problem that may require medical interventions such as surgery, the SLP will refer the client to a physician and send a report of the assessment to that physician.

Example 1:

A 24 year-old client with muscular dystrophy who is on a ventilator and has a history of dysphagia has recently been having increased difficulty eating his current diet texture. The speech – language pathologist (SLP) requires an instrumental assessment to determine what, if any, changes need to be made to the current diet texture. A videofluoroscopic swallow study is not possible due to the inability to transfer the client to the chair for the x-ray. A Fiberoptic Endoscopic Evaluation of Swallowing (FEES) is the safest, most effective way to assess the client's swallowing. The FEES allows the SLP to view the pharyngeal and laryngeal structures while the client is swallowing in order to evaluate the effectiveness and efficiency of the swallow. This assessment allows the SLP to assess for risk for aspiration and choking, and make decisions regarding appropriate diet texture, treatment, and prognosis.

Example #2:

A singer is referred to the speech – language pathologist (SLP) by the ENT with a diagnosis of vocal nodules. Issues include significant muscle tension within the larynx as observed on

videolaryngoscopy using flexible nasendoscopy. There is ventricular band and AP constriction of the laryngeal structure during phonation. The client is participating in voice therapy but is having significant difficulty reducing the laryngeal tension. The SLP is able to use nasendoscopy during treatment sessions for visual feedback during speaking to help the client reduce muscle tension. After a course of therapy, vocal quality is improved but the client is still very anxious about the presence of the nodules. The SLP then does a follow-up nasendoscopic video to demonstrate to the client that the nodules have resolved.

SLPs are competent to insert or remove an instrument or a device beyond the point in the nasal passages where they normally narrow, for the purposes of assessing and managing communication and swallowing disorders based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), voice disorders (45 hours), structurally related disorders (45 hours), and swallowing disorders (45 hours). Students also complete clinical practicums where they have the opportunity to observe and/or assist with nasendoscopy for the purpose of assessing swallowing, voice, or palatal function. Nasendoscopy is considered an advanced competency requiring additional training beyond the graduate level.

Currently there are approximately nine clinicians in the province who are trained to complete nasendoscopic evaluations. Training consists of readings, workshops, peer training, and yearly competency assessments. At this time all of the clinicians who are trained to complete nasendoscopic evaluations in Manitoba work within the Winnipeg Regional Health Authority (WRHA), except for one, who works in the Interlake Regional Health Authority. The WRHA has guidelines regarding initial competency assessment and annual requirements to maintain competency. Specific guidelines are as follows: The SLP trainee must first observe ten nasendoscopies. The trainee must then perform ten supervised nasendoscopies on “normal” subjects. The trainee must then perform five complete supervised assessments on clients including nasendoscopy, analysis of the assessment, and a written report. Once this is complete, the SLP is then considered competent to perform nasendoscopic procedures. In order to maintain competency, the SLP must perform at least ten assessments per year, as well as have at least one of the assessments observed by another trained SLP who signs off on that SLP’s yearly competency.

Again, the WRHA competency guidelines, and other researched sources of best practice, would be used in the development of a Practice Direction for Nasendoscopic Evaluations enacted by the College of Audiologists and Speech – Language Pathologists of Manitoba. All SLPs registered by CASLPM would be required to follow such practice directions.

Reserved Act #4 c

Insert or remove an instrument or a device, or finger beyond the pharynx for the purpose of assessing and managing voice disorders and voice restoration, and for the purpose of suctioning a tracheostomy.

Reserved Act #4 g

Insert or remove an instrument or a device, or finger into an artificial opening into the body for the purpose of assessing and managing voice disorders and voice restoration, and for the purpose of suctioning a tracheostomy.

Assessing and managing voice disorders and voice restoration

Due to surgical alterations of the normal pathway at the time of a laryngectomy or at a later date, the surgeon may create an opening between the trachea and the esophagus. This opening is called a tracheoesophageal puncture (TEP). A small one-inch valved tube (voice prosthesis) can then be placed into this passage to enable tracheoesophageal speech. Voice is produced by temporarily blocking the stoma, either with a finger or an adjustable tracheostoma valve, so that exhaled air from the lungs can be directed from the trachea through the prosthesis into the esophagus (where vibrations are produced) and then out through the mouth. A prosthetic device is inserted into the TEP to maintain the fistula and route respiratory air from the trachea into the esophagus. This air allows the pharyngo-esophageal tract to become the vibrating source for vocal sounds. When a client who has had a laryngectomy has a voice prosthesis, it is primarily the responsibility of the speech – language pathologist (SLP) to participate in the selection and fitting of the voice prosthesis, to teach the care and use of the prosthesis, to identify and facilitate resolution of problems related to sound generation, and to teach the effective use of the prosthesis for speaking. In the course of treatment it may be necessary to insert or remove a voice prosthesis for fitting, cleaning, maintenance, or training in self-management of the prosthesis. Dilation of the fistula may also require a catheter.

In British Columbia and Alberta, SLPs are authorized to perform these reserved acts.

Example #1:

Initial post-operative prosthesis fitting: a client who has undergone total laryngectomy sees the speech – language pathologist (SLP) for post-operative prosthesis fitting. The SLP removes the indwelling catheter, inserts a dilator into the TEP fistula, and then inserts a sizing device to determine the appropriate prosthesis length. The SLP removes the sizing device and then prepares and inserts the prosthesis. The SLP checks prosthesis seating. The SLP instructs the client on voice production by occluding the stoma with a gloved finger. The client then attempts to produce voice with the SLP assisting the client to cover the stoma with his finger.

Example #2:

Routine replacement of an indwelling (semi-permanent) prosthesis: a client who has undergone total laryngectomy also has arthritis and cataracts, resulting in vision and manual dexterity limitations. These deficits preclude the client from removing and changing his own prosthesis. He therefore uses a more secure, semi-permanent ("Indwelling") voice prosthesis, which is change routinely by the speech – language pathologist (SLP) twice a year. This involves the SLP removing the prosthesis with haemostats, dilating the fistula with a dilator or catheter, resizing the fistula if necessary, preparing the replacement prosthesis, inserting the prosthesis and finally checking for prosthesis fit and function.

SLPs are competent to insert or remove an instrument or a device, or finger into an artificial opening into the body for the purpose of assessing and managing voice disorders and voice restoration based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), speech physiology (60 hours), voice disorders (45 hours), structurally related disorders (45 hours), and swallowing disorders (45 hours). Students also complete clinical practicums in hospital settings where they have the opportunity to be trained to insert TEP prostheses. Managing a TEP prosthesis is considered an advanced competency. Currently there are approximately six SLPs in Manitoba who are trained to work with TEP prostheses. Training takes place in a clinical setting allowing the SLP

to work with more experienced SLPs and a number of clients. SLPs who manage TEP speakers ensure that they have acquired the knowledge and skills necessary to provide this service, including readings, workshops, peer training, and supervised experience.

Suctioning a tracheostomy

Suctioning a tracheostomy is an invasive procedure used to remove airway secretions, blood, vomitus, or other foreign material from the large lower airways. Sub-atmospheric pressure is applied through a catheter inserted into the artificial airway of the tracheostomy. When the natural systems for secretion removal are impaired, suctioning may become necessary to remove these accumulated secretions for the purposes of swallowing and communication. In the course of completing a swallowing assessment, for example, many times it is necessary to suction a client in order to assess for aspiration or to clear out material before, during, or after a swallowing assessment. In order to manage a client's tracheostomy for communication purposes as well, many times it is necessary to suction the client so that they are able to produce voicing when a cap or a valve is placed on their tracheostomy. In the hospital, especially, in an acute care setting, nursing and respiratory therapy staff are not always available to provide suctioning during all swallowing and communication assessments.

In British Columbia and Alberta, SLPs are authorized to perform these reserved acts.

Example # 1:

An individual in an acute care hospital has had a tracheostomy for one month following a severe traumatic brain injury (TBI). The speech – language pathologist (SLP) has been following the client for swallowing and communication concerns since admission. One goal is for this client to begin eating by mouth again. During a swallowing assessment the SLP provides the client with food that is easily seen if it is suctioned (e.g.; chocolate pudding). The SLP provides the client with this food and suctions the tracheostomy following the swallow. If there is no evidence of chocolate pudding in the suction tube this is a good indication that the person has not aspirated the food. If there is chocolate pudding in the suction tube, this indicates that the client has aspirated the food. This allows the SLP to make clinical decisions regarding what other diet textures of food to try as well as what other assessments may need to be completed (i.e.: videofluoroscopic swallow study, fiberoptic endoscopic evaluation of swallowing).

Example # 2:

A client with muscular dystrophy who has had a long term tracheostomy uses a speaking valve to be able to speak with the tracheostomy in place. Prior to having the valve placed on the stoma, the speech – language pathologist (SLP) must suction secretions in the tracheostomy so that the client is able to breathe adequately and produce adequate voicing.

SLPs are competent to insert or remove an instrument or a device, or finger into an artificial opening into the body for the purpose of suctioning a tracheostomy based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), speech physiology (60 hours), voice disorders (45 hours), structurally related disorders (45 hours), and swallowing disorders (45 hours). Students also complete clinical practicums in hospital settings where they have the opportunity to be trained to suction tracheostomies. Suctioning a tracheostomy is considered an advanced competency. Currently,

there are approximately eight to ten SLPs in Manitoba who are trained to suction clients with tracheostomies. Training takes place in a clinical setting allowing the SLP to work with more experienced SLPs and a number of clients. SLPs that provide suctioning to clients with tracheostomies ensure that they have acquired the knowledge and skills necessary to provide this service, including readings, workshops, peer training, and supervised experience.

Reserved Act #10 b (vii)

Apply surface electromyography for the purpose of treating swallowing disorders.

A speech – language pathologist (SLP) uses surface electromyography (sEMG) when performing swallowing treatment as a method of providing biofeedback to the client. It is not considered a diagnostic tool and is used only for the purposes of treatment. During treatment, electrodes are placed over the belly of the targeted muscle, commonly the suprahyoid muscles associated with laryngeal excursion. An example of one used is the Myotrack 3 system with triode patch electrodes. Typically the reference electrodes are placed midline (vertically) between the thyroid notch and the mandible, and the ground electrode is placed laterally to the reference electrodes. Clients are then instructed to proceed with target exercises, often the Mendelsohn maneuver, which is a specific type of swallowing exercise. Biofeedback will provide information regarding how successfully the client is engaging the muscles that elevate the larynx, as well as provide some input as to the strength and coordination of the muscle movement (i.e.: if muscle movements are strong and steady vs. sporadic and uncontrolled, this should be reflected in the biofeedback pattern). Based on the feedback provided from the sEMG, the SLP is then able to provide the client with specific instructions on what changes to make during the swallowing exercises. The SLP is also able to determine if a relative amount of improvement has been made in the strength and coordination in the client's swallow during the course of therapy.

Example #1:

A 56 year-old client with a history of a brainstem stroke resulting in severe pharyngeal dysphagia is seen in an out swallowing clinic three months following his stroke. He is unable to eat or drink anything by mouth, but is beginning to show signs of an increasingly effective swallow. The speech – language pathologist (SLP) is able to use sEMG as a biofeedback tool to assist this client in completing several different swallowing exercises. By placing the electrodes on the targeted muscles, the client is able to visualize the muscle movement during the swallow. He is then better able to coordinate the swallow, and exert more effort when needed using the feedback provided by the sEMG. The SLP may begin trials of small amounts of liquid intake during these exercises provided the client is successful with improving the strength and coordination of his swallow during this therapy.

SLPs are competent to apply surface electromyography for the purpose of treating swallowing disorders based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), speech physiology (60 hours), structurally related disorders (45 hours), and swallowing disorders (45 hours). Some schools also teach students to use sEMG as a biofeedback method within courses. Students also complete clinical practicums in a variety of settings to obtain a total of 350 hours of clinical experience, where they may have experience using sEMG. In certain situations, a clinician may not have experience using sEMG prior to registration. In this case, the clinician would seek the appropriate training, including readings and workshops, and mentorship prior to using sEMG.

Reserved Act #20

Performing a psycho-social intervention with an expectation of modifying a substantial disorder of thought, mood, perception, orientation, or memory that grossly impairs judgement, behaviour, the capacity to recognize reality, or the ability to meet the ordinary demands of life, as related to communication and cognitive-linguistic function.

A speech – language pathologist (SLP) assesses and treats people who have communication impairments related to disordered thought, mood, perception, orientation, and memory, which can result in impaired judgement and behaviour. Referred to as cognitive-communication disorders or cognitive-linguistic disorders, these are difficulties in communication which result from generalized cognitive impairment. SLPs frequently treat people with communication impairments that are related to these cognitive deficits in many different settings, including school and hospital settings, and with both children and adults.

Example #1:

A client with a traumatic brain injury (TBI) is seen by a speech – language pathologist (SLP) on a rehabilitation unit approximately one month following her injury. This client is not oriented to the date or place and continues to need frequent reminders as to why she is in the hospital and what has happened. She is unable to remember what happens from day to day. In conversation, this client's thoughts are very disorganized and she often switches from one topic to the next in a disconnected way that is difficult to follow. She often uses words that are vague and non-descript, and has difficulty paying attention if the conversation is longer than a few minutes. This client, however, feels as though she is fine to go home and may be able to start back to work soon. She is unsure as to why she continues to require therapy and gets extremely frustrated and upset when this topic is discussed. The SLP would assist the client with basic orientation, providing written and verbal cues as needed so that she understood her situation. Providing a way for the client to remember information from day to day would allow her to talk about things that happened during her day as well as use information that was told to her previously. Working on organization and word-finding for speech would assist her in organizing her thoughts so that it was easier for her to have conversations. In addition, this client's mood was also an issue. Providing this client with a way to understand what was happening by helping with orientation, memory, and thought organization may begin to help her manage some of her frustration.

Example #2:

A twelve-year old student diagnosed with Asperger's Syndrome exhibits great difficulty with social skills and any form of communication which is not literal (i.e.: use of figurative language, such as idioms like "you are pulling my leg," do not make sense to him and are thus interpreted literally). Peer relationships are impaired because he is not able to interpret nonverbal communication such as body posture, gesture, facial expression and eye contact, which can encompass up to eighty percent of the communicative message. While most students learn the nonverbal and figurative aspects of communication and language by practice in daily interactions, the client with Asperger's is not able to develop this knowledge simply by communicating with others. The result can often be anger and physical outbursts on the part of the client, who is not able to understand and respond appropriately to others. The speech – language pathologist would teach the meaning of these subtleties of language directly and teach interpretation of pragmatic aspects of communication, such as: making eye contact (appropriate to culture), interpreting figurative language and idioms of speech, and interpreting,

understanding and responding to social situations involving nonverbal aspects of the message. In addition, the client with Asperger's Syndrome may have difficulty with expression of appropriate vocabulary and sentences, due to difficulties with working memory reflected in word retrieval and retrieval and expression of ideas in clear, organized and cohesive sequence. The SLP would provide cues for word retrieval and re-telling stories with prompting and scaffolding. It may also be difficult for this client to revise and repair communication breakdown, thus resulting in acting out behaviour. The areas of working memory, organization and planning and self monitoring are all executive functions of cognition which reflect communication difficulties such as processing language, word and idea retrieval, sequencing ideas in discourse, clarity of expression and logical progression of thoughts, and repairing breakdown in communication. The SLP would provide services in these areas, as well.

SLPs are competent to perform a psycho-social intervention with an expectation of modifying a substantial disorder of thought, mood, perception, orientation, or memory that grossly impairs judgement, behaviour, the capacity to recognize reality, or the ability to meet the ordinary demands of life, as related to communication and cognitive-linguistic function based on a combination of coursework and clinical experience. In the graduate program, students take courses in anatomy (60 hours), child language development and impairment (105 hours), principles of clinical practice (45 hours), aphasia (60 hours), neurocognitive communication disorders (30 hours), and advanced principles of clinical practice (30 hours). Students also complete clinical practicums in a variety of settings, where they assess and treat clients with cognitive-communication disorders as a result of such things as traumatic brain injury, autism, or dementia. Following graduation, SLPs are also required to complete one year of provisional membership where they are mentored by a fully registered SLP to ensure competency.

References:

[1] Hours for clinical coursework are based on the Masters of Health Science in Speech - Language Pathology curriculum from the University of Toronto 2010-2011.

[2] Katzan, I.L., Cebul, R.D., Husak, S.H., et. al. (2003, February 25). The effect of pneumonia on mortality among s hospitalized for acute stroke. *Neurology, 60*(4): 620-625.

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